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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/557,708
Filing Date: November 07, 2001
Appellant(s): CHRISTOPHER GAGE et al.

Scott D. Paul
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/29/2008 appealing from the Office action mailed 4/17/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,041,357	KUNZELMAN et al	3-2000
6,374,300	MASTERS	4-2002
6,772,333	BRENDEL	8-2004
6,763,468	GUPTA et al	7-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-27 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12 - 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12 - 21 recite "A computer program product" and "computer readable code means" which are directed to software, per se, and are thus non-statutory unless computer-implemented on a computer-readable medium.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 9 recites the limitation "all filtering" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kunzelman et al* (US 6,041,357) in view of *Masters* (US 6,374,300).

a. Referring to claim 7, *Kunzelman et al* teaches a method of routing a request by an end user device to a particular one of a plurality of redundant servers residing behind a network dispatching mechanism, said methods comprising the steps of:

- if said URL contains a valid routing token, further determining, at the network dispatching mechanism, if a session binding indicated by said routing token is old (*col.5 lines 38-65, col.6 lines 22-32*);
- if said URL contains a valid routing token and said routing token is not old, forwarding, by said network dispatching mechanism, the request, including the URL, to the particular server indicated by said valid routing token (*col.6 lines 43-57*);
- removing, by said particular server, said valid routing information from the URL (*col.6 lines 43-57—parsing URL for session data*);
- storing, by said particular server, said routing information removed from said valid routing token, where said valid routing information can be accessed subsequently by an outbound data stream filter during the processing of an outbound reply related to said request (*col.7 lines 59-67—caching and storing data for further access*);
- accessing, by said particular server, a server-side storage location where information regarding a session between the particular server and the end user device is stored (*col.5 lines 38-62, col.7 lines 59-67*); and
- inserting, by said particular server, said session information into said request (*col.6 lines 43-52*).

However, *Kunzelman et al* fail to explicitly teach implementation of a dispatcher performing the steps of: receiving, at the network dispatching mechanism, a request for information indicated by a uniform resource locator (URL); determining, at the network dispatching mechanism, if said URL contains a valid routing token; if said URL contains a valid routing token, further determining, at the network dispatching mechanism, if a session binding indicated by said routing token is old; and if said URL contains a valid routing token and said routing token is not old, forwarding, by said network dispatching mechanism, the request, including the URL, to the particular server indicated by said valid routing token. Yet, *Masters* teach receiving a request at the controller and determining if the URL contains a valid cookie for a specific server and routing the client's request to a selected server, wherein the cookie information includes data that identifies the selected server, a hash value and a timestamp (*Figures 2-7, col.2 lines 27-58, col.5 line 33-col.6 line 31, col.9 lines 4-34, col.12 line 44-col.13 line 47*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Kunzelman et al* with *Masters* by implementing a dispatcher/controller to select the server to receive the request in order to load balance the client requests received over the network. Load balancing techniques are well-known and commonly used in the art for equally distributing client request across a plurality of servers.

b. Claim 18 contains limitations that are substantially equivalent to claim 7 and is therefore rejected under the same basis.

c. Per claim 8, *Kunzelman et al* with *Masters* teach the method as claimed in claim 7, *Kunzelman et al* further teach wherein additional filtering of the URL is done prior to the forwarding step (*col.5 line 38-col.6 line 12*).

d. Claim 19 is substantially equivalent to claim 8 and is therefore rejected under the same basis.

Claims 1-3, 5, 6, 9, 12-14, 16, 22-24 and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Brendel* (US 6,772,333) in view of *Masters* (US 6,374,300).

e. Referring to claim 1, *Brendel* teaches a method of establishing a persistent relationship between an end user device and a server where the server is one of a plurality of servers managed by a dispatcher and the end user device accesses the server using a uniform resource locator (URL), the method comprising the steps of:

- receiving at the dispatcher, a request for information from the end user device (*Abstract, col.3 lines 7-15*);
- determining by the dispatcher, which of the plurality of server to select for satisfying the request (*Abstract, figure 2, col.2 lines 18-67, col.4 line 63-col.5 line 2, col.5 lines 46-67—load balancer determines which server to receive the request*);
- creating, at the selected server, a token comprising at least an identifier for the selected server, a date/time stamp, and a key, said key for accessing a server-side storage area for information regarding the persistent relationship at the end user device (*Abstract, col.6 lines 8-38, col.7 lines 31-67, col.8 lines 16-42, col.9 lines 10-12, col.11 line 66-col.12 line 2—the server selected from the server farm creates a cookie and SSL session ID; the cookie has a server ID and SSL session ID has timestamp for expiration and key*); and
- sending, by the selected server to the client device, a response with the token (*col.11 lines 14-34, col.12 lines 30-62*).

Although *Brendel* teaches embedding the SSL component into a webpage (*col.12 lines 30-62*), *Brendel* fails to explicitly teach a token comprising at least an identifier for the

selected server, a date/time stamp, and a key, said key for accessing a server-side storage area for information regarding the persistent relationship at the end user device and inserting the token into the URL. Yet, *Masters* teach receiving a request at the controller and determining if the URL contains a valid cookie for a specific server and routing the client's request to a selected server, wherein the cookie information includes data that identifies the selected server, a hash value and a timestamp (*Figures 2-7, col.2 lines 27-58, col.5 line 33-col.6 line 31, col.9 lines 4-34, col.12 line 44-col.13 line 47*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Brendel* with *Masters* by inserting a cookie into a URL in order for a server to associate a client's session with a particular URL and track/monitor the user's activity on a particular website—such tracking methods are well-known in the art.

f. Claims 12 and 22 contain limitations that are substantially equivalent to claim 1 and are therefore rejected under the same basis.

g. Per claim 2, *Brendel* with *Masters* teach the method as claimed in claim 1, *Masters* further teaches wherein said token is encoded using a modified Base64 encoding (*col.15 lines 23-col.16 line 7*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to encode a token in a modified Base64 because modified Base64 is a standard encoding technique used for MIME email documents.

h. Claims 13 and 23 are substantially equivalent to claim 2 and are therefore rejected under the same basis.

i. Per claim 3, *Brendel* with *Masters* teach the method as claimed in claim 1, *Brendel* further teaches wherein said token has a checksum or hash verification field (*Masters—col.16 lines 1-7*).

j. Claims 14 and 24 are substantially equivalent to claim 3 and are therefore rejected under the same basis.

k. Per claim 4, *Brendel* with *Masters* teach the method as claimed in claim 3, *Masters* further teaches wherein said hash is a SHA-1 hash computed over said identifier for said selected server, said date/time stamp, and said key (*col.15 line 58-col.16 line 17*).

l. Claims 15 and 25 are substantially equivalent to claim 4 and are therefore rejected under the same basis.

m. Per claim 5, *Brendel* with *Masters* teach the method as claimed in claim 3, *Masters* further teaches wherein said checksum or hash is encoded using a modified Base64 encoding (*col.15 line 58-col.16 line 7*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to encode a token in a modified Base64 because modified Base64 is a standard encoding technique used for MIME email documents.

n. Claims 16 and 26 are substantially equivalent to claim 5 and are therefore rejected under the same basis.

o. Per claim 6, *Brendel* with *Masters* teach the method as claimed in claim 1, *Brendel* further teaches wherein said information regarding said persistent relationship is stored as a cookie on said server (*col.3 lines 7-56, col.6 lines 1-38, col.8 lines 32-67, col.13 lines 19-31; Masters—col.5 lines 14-40, col.6 lines 8-11*).

p. Claim 27 is substantially equivalent to claim 6 and is therefore rejected under the same basis.

q. Per claim 9, *Brendel* with *Masters* the method as claimed in claim 1, *Brendel* further teaches wherein all filtering is performed within the dispatcher (*col.5 line 53-col.6 line 7; Masters—col.6 lines 8-31, col.6 line 66-col.7 line 38*).

Claims 10, 11, 17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over to *Gupta et al* (US 6,763,468) in view of *Masters* (US 6,374,300).

r. Referring to claim 10, *Gupta et al* teach a method of sending information to a requesting end user from an application over a session wherein said application resides at one of a plurality of redundant servers, said method comprising the steps of:

- receiving response information from said application, said response information including a URL (uniform resource locator) (*col.12 lines 10-14*);
- determining if a server-side key cookie has been used for storing session information between said end user and said application (*col.11 lines 57-66, col.12 lines 3-8—determining if a server-side access cookie has been used*);
- if a server-side key cookie has been used for storing session information, retrieving a session key from said key cookie (*col.12 lines 3-8 and 44-55—retrieving access session cookies*);
- if a key cookie was not used for storing session information, retrieving said session key from a control block (*col.12 lines 8-18*);
- storing said removed cookies in a predetermined server-side storage area (*col.6 lines 28-37, col.12 lines 48-55, col.13 lines 13-17—cookies are stored and maintained at the server*); and
- creating a sticky routing string (*col.12 lines 10-18, col.13 lines 13-21 and 40-45*).

Gupta et al teach updating cached session information and forwarding the updated session information to the server (*col.13 lines 13-21*), yet *Gupta et al* fail to explicitly

teach removing all cookies from said response information; updating said URL to indicate the removal of said cookies; updating a date/time stamp in said sticky routing string; inserting said sticky routing string into said URL; and transmitting said response information, including said URL, to said end user. However, *Masters* teach receiving a request at the controller and determining if the URL contains a valid cookie for a specific server and routing the client's request to a selected server, wherein the cookie information includes data that identifies the selected server, a hash value and a timestamp and updating/rewriting of the cookie data (*Figures 2-7, col.2 lines 27-58, col.5 line 33-col.6 line 31, col.9 lines 4-34, col.11 line 20-col.12 line 25, col.12 line 44-col.13 line 47*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Gupta et al* with *Masters* for having a predetermined server-side storage for storing the cookies related to the user and the user's session, because this allows a user to later access a server and continue a previous session based off of the stored session information and by having a server-side key cookie because this allows the user to utilize multiple client devices in the same client-server session. Furthermore, it would have been obvious to insert the "sticky routing string" or token the URL in order to a server to associate a token with a particular URL and track/monitor the user's activity on a particular website—such tracking methods are well-known in the art.

s. Claims 17 and 20 contain limitations that are substantially equivalent to claim 10 and are therefore rejected under the same basis.

t. Per claim 11, *Gupta et al* with *Masters* teach the method as claimed in claim 10, *Gupta et al* further teach wherein, prior to said determining step, said response information is

transmitted from said application through one or more filters (*Abstract, col.7 lines 1-23, col.12 lines 3-67; Masters—col.6 lines 8-31, col.6 line 66-col.7 line 38*).

u. Claim 21 is substantially equivalent to claim 11 and is therefore rejected under the same basis.

(10) Response to Argument

A. Appellants argue, with respect to claims 12-21, that 35 U.S.C. 101 rejection is improper.

Examiner respectfully disagrees. The "computer program product" and "computer readable code means" instantiate a computer readable medium that's statutory under 35 USC 101. Appellant's disclosure does not mention or define the computer program product or the code means, therefore the statutory compliance has not been established. The rejection has therefore been maintained.

B. Appellants argue, with respect to claim 9, that 35 U.S.C. 112 second paragraph "lack of antecedent" rejection is improper.

Examiner respectfully disagrees. Claim 9 states, "A method as claimed in claim 1 wherein all filtering is performed within the dispatcher". Citing "all filtering" gives the impression that the filtering function has been mentioned prior to this citation and is known function performed by the dispatcher. The lack of filtering in the previous claim, indicates that filtering is being introduced this instant claim. However this claim language is not consistent with this a new function introduction, per se, since "all filtering" connotes that the filtering function has already been introduced as an understood function of the dispatcher system. The

rejection has therefore been maintained.

C. Appellants argue, with respect to claims 7-8 and 18-19, that the cited prior art *Masters* fails to teach the claimed limitation of "determining, at the network dispatch mechanism, if a session binding indicated by said routing token is old".

Examiner respectfully disagrees. *Masters* teaches the implementation of cookies with timestamps that expire (*col.2 line 59-col.3 line 7*) which is an indication that the cookie information is old. The server array controller is capable of determining if the cookie's timestamp has expired (*col.7 lines 26-37*, *col.8 lines 38-53*), wherein a session-expiration and token time-stamping are techniques supported in the primary reference *Kunzelman et al* (*col.4 lines 40-45, col.6 lines 22-32*). The teaching of *Masters* is a valid implementation of the above feature since the timestamp is associated with "the mapping of the relationship between the client and the selected node server" (*col.9 lines 63-66*); thus the functionality of the claim language is achieved by using a cookie's timestamp to determine if a client-server session is binding or expired (i.e. "old").

D. Appellants argue, with respect to claim 7, that the cited prior art *Kunzelman et al* fails to teach the claimed limitation of "removing, by said particular server, said valid routing information from the URL".

Examiner respectfully disagrees. *Kunzelman et al* fail to specifically mention the term "removing", however *Kunzelman et al* do teach that session tokens are encoded with URL wherein in the process of the decoding the session token some of the session information is sent as out-of-band data (*col.6 lines 43-57*), and "not all [of] the session information is passed to the source server node" (*col.5 lines 50-58*). These teachings disclosed in *Kunzelman et al* are

indications that some session information, which functions as routing information (*col.4 lines 28-63, col.5 lines 21-31*), is removed from the URL in order to obtain any necessary out-of-band session information.

E. Appellants argue, with respect to claim 7, that the cited prior art *Kunzelman et al* fail to teach the claimed limitation of "storing, by said particular server, said routing information removed from said valid routing token, where said valid routing information can be accessed subsequently by an outbound data stream filter during the processing of an outbound reply related to said request".

Examiner respectfully disagrees. As discussed above in argument D, *Kunzelman et al* teach that some session information, which functions as routing information (*col.4 lines 28-63, col.5 lines 21-31*), is removed from the URL in order to obtain any necessary out-of-band session information (*col.6 lines 48-52*). The session/routing information gleaned from the URL is stored by the server and uses the out-of-band session information as necessary when responding to client's request (*col.5 line 49-col.6 line 5*).

F. Appellants argue, with respect to claim 1, that the 35 USC 103(a) rejection over *Brendel* in view of *Masters* fails to teach the claimed limitation of "creating, at the selected server, a token comprising at least an identifier for the selected server, a date/time stamp, and a key, said key for accessing a server-side storage area for information regarding the persistent relationship and the end user device".

Examiner respectfully disagrees. *Brendel* clearly teaches the claimed features of "creating, at the selected server, a token comprising at least an identifier for the selected server, a date/time stamp, and a key, said key for accessing a server-side storage area for information regarding the persistent relationship and the end user device". First off, *Brendel* discloses

"creating, at the selected server, a token comprising at least an identifier for the selected server" in teaching that a server generates a SSL session ID for the encrypted session created between the server and the client and also generates a server-assignment cookie that identifies the specific server assigned to the user (*Abstract, col.4 lines 27-66, col.9 lines 2-12*). Next, *Brendel* teaches "a date/time stamp" by disclosing as SSL session timeout which a common field used with sessions to determine when the session was created and when it has expired (*col.4 lines 61-63, col.11 line 66-col.12 line 2*). Lastly, *Brendel* teaches the claimed feature of "a key, said key for accessing a server-side storage area for information regarding the persistent relationship and the end user device" by generating and implementing an encryption key that allows access to the server's resources during the session that has been established (*Abstract, col.4 lines 19-50, col.11 lines 20-22*). *Brendel* fails to explicitly teach that the cookie and session information are inserted into the URL. However, *Masters* teaches the incorporation of cookie/session data into URL request for providing routing information (*col.9 lines 63-66, col.10 lines 30-65, col.12 lines 48-63*).

G. Appellants argue, with respect to claim 10, that the 35 USC 103(a) rejection over *Gupta et al* in view of *Masters* fails to teach the claimed limitation of "retrieving a session key from a key cookie".

Examiner respectfully disagrees. *Gupta et al* teach that a session service "uses the cookies to find a session associated with the user" (*col.11 line 42-col.12 line 2, col.12 lines 7-8 and 44-55*). This teaching from *Gupta et al* teaching is sufficient in retrieving the session key from the cookie by allowing access to the server via login (*col.11 line 42-col.12 line 2*). The key used to authenticate the user and to access the server, subsequently allows retrieval of session

information (*col.7 lines 1-15*). Appellant's arguments are therefore unpersuasive and the rejection is maintained.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

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Examiner, Art Unit 2141

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